# Morphosemantics of the Proto-Tibeto-Burman *a- prefix: glottal and nasal complications (with an Appendix offering analogies with the English preformative a-)( Handouts )

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# Morphosemantics of the Proto-Tibeto-Burman ***a-*** prefix: glottal and nasal complications

(with an Appendix offering analogies with the English preformative **a-**)

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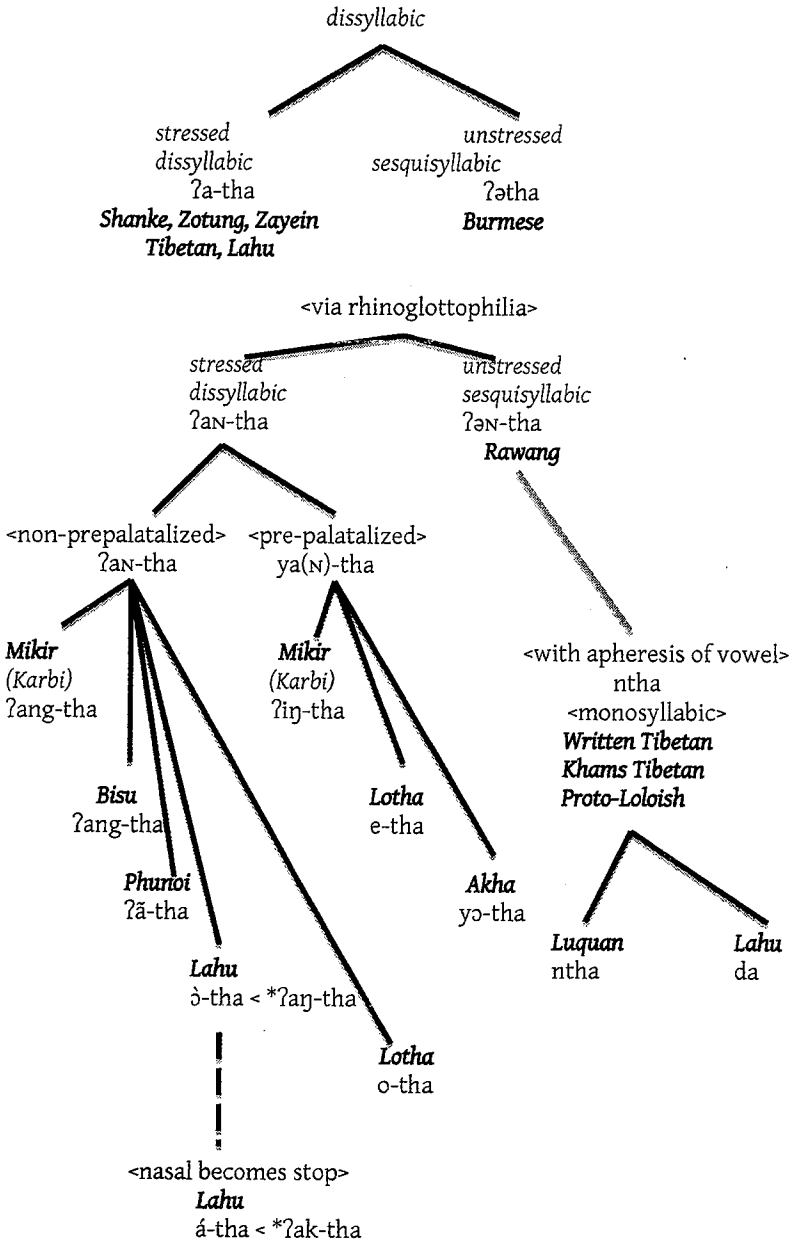


*Fig. 1. Putative historical development of the PTB *glottal/nasal prefix*

## *I. Introduction*

This paper aims to provide a unified account of the so-called PTB ***a-** prefix, encompassing both open-syllable and nasal-final variants.[1] In addition, it is my contention that both stressed and unstressed variants of the prefix should be reconstructed. This investigation will hopefully serve to shed more light on the mysterious Written Tibetan letter known as "a-chung", and to demonstrate that the phonetic features of nasalization and glottalization have a closer interrelationship than has been generally recognized.

## *II. Morphophonemic overview of the PTB "a- prefix"*

Pan-allofamic formula (i.e., a formula that includes all the recognized variants of the etymon:

***ʔa- ≍ *(ʔ)ə- ≍ *ʔə̃- ≍ *ʔaŋ- ≍ *yaŋ- ≍ *ʔak-**

Let's break down this formula, and elaborate it somewhat. See Fig. 1, where the root is arbitrarily selected as ***ta**.

There has always been something rather anomalous about the PTB prefix conventionally reconstructed as ***a-**. While all the other prefixes set up for the proto-language (***s-, *m-, *b-, *d-, *g-, *r-**) are consonantal, ***a-** looks as if it consisted of a simple vowel. My contention is that the phonetics and morphophonemics of this prefix were considerably more complicated than that:

·The prefix should be reconstructed with a glottal stop preceding the vowel (i.e. ***ʔa-**), bringing it in line with the other consonantal prefixes.
·Both stressed and unstressed variants should be recognized (i.e. ***ʔa-** vs. ***ʔə-**).
·A nasal increment to the prefix seems to have arisen at an early date, via the mechanism of rhinoglottophilia (see Section IV), leading to forms like ***ʔaɴ** (stressed)[2] and ***ʔə̃-** (unstressed).
·Some languages, notably Mikir (Karbi), Lotha, and Akha, developed a palatalized as well as a non-palatalized variant of the nasalized prefix (i.e. ***ʔaɴ- ~ *yaɴ-**).
·Certain languages (Tibetan, Proto-Lolo-Burmese) underwent loss (apheresis) of the vowel of the nasalized prefix, yielding prenasalized monosyllabic forms.
·Lahu (and perhaps other languages) have somehow developed a stop-finalled variant in addition to the nasal-finalled one (i.e., ***ʔaŋ > *ʔak-**).[3] See Section VII.

## *III. Semantics of the *a- prefix*

### *3.1 Before nouns*

*3.1.1 Kinship terms*
The stressed variant of the prefix, ***ʔa-**, occurs widely in kinship terms. Wolfenden (1929:71) considers this to have been "the oldest and original usage" of the prefix. A few examples:

*(1) Written Tibetan (WT)*
This kinship prefix is written with the letter *a-chen* ("big a"),[4] transcribed by Jäschke (1881:603-608) and Wolfenden (1929) as 'a-, and by Benedict (1972) as ʔa-:

| | | | |
|---|---|---|---|
| 'aunt' | **ʔa-sru** | 'grandmother' | **ʔa-phyi**[5] |
| 'elder brother' | **ʔa-jo** | 'husband of f's sister' | **ʔa-baŋ** |
| 'elder sister/wife' | **ʔa-che** | 'mother' | **ʔa-ma** |
| 'father's brother' | **ʔa-khu** | 'mother's brother' | **ʔa-źaŋ** |
| 'father's sister' | **ʔa-ne** | | |

*(2) Jingpho*

Jingpho has a kinship prefix written as "a-" in earlier sources, but as "ə-" in Maran 1979, later revised to "ʔə-". Maran was the first to observe (p.c., 1963) that the vocative forms of kin terms beginning with a sonorant are sometimes pronounced with preglottalization of the root, but without the schwa vowel, which here undergoes apheresis:[6]

| | | | |
|---|---|---|---|
| 'daughter-in-law!' | **ʔnām** | 'maternal cross-cousin' | **ʔnīŋ** |
| 'elder sister' | **ʔnā** | 'mother' | **ʔnû** |
| 'father' | **ʔwâ** | 'mother-in-law!' | **ʔmōi** |
| 'grandma' | **ʔwōi** | 'sister-in-law!' | **ʔrát** |

*(3) Lahu*

Lahu uses two variants of the prefix in kinship terms: **a$^{33}$-** (usually vocative) and **ɔ̀-** (< ***aŋ-**; see VI below). They are often completely interchangeable:[7]

| | | | |
|---|---|---|---|
| 'father' | **a-pa / ɔ̀-pa** | 'mother (poetic)' | **a-ma / ɔ̀-ma** |
| 'grandfather' | **a-pū / ɔ̀-pū** | 'older sibling' | **a-ví / ɔ̀-ví** |
| 'grandmother' | **a-pi / ɔ̀-pi** | 'younger sibling' | **a-ni / ɔ̀-ni** |
| 'mother' | **a-e / ɔ̀-e** | 'siblings' | **a-ví-a-ni / ɔ̀-ví-ɔ̀-ni** |

*3.1.2 Body-parts*

Many languages use this prefix before roots for parts of the body. For abundant examples, see Sections V and VI.

*3.1.3 Genitive constructions*

Many Himalayish and Kuki-Chin languages use the prefix in genitive constructions before the possessed noun, e.g. Bahing **biŋ ə-tami** 'calf' ("cow its-child"); Lepcha **vi a-so** 'blood vessel' ("blood its-vessel"); Mikir **kèng a-sék** 'ankle'("leg its-joint"), **o-so a-hem** 'placenta' ("child its-house") ; Lotha **o-mi e-khu** 'smoke' ("fire its-smoke"). See V(6).

*3.1.4 As a 3rd person prefix*

Many Chin and Naga languages have developed neat systems of subject/object personal prefixes on verbs,[8] that do double duty as possessive prefixes on nouns. The 3rd person singular prefix is typically **ʔa-**, as, e.g. in Lai Chin:

| | | | |
|---|---|---|---|
| **ka-kal** | 'I go' | **ka-rool** | 'my food' |
| **na-kal** | 'you go' | **na-rool** | 'your food' |
| **ʔa-kal** | 'he/she goes' | **ʔa-rool** | 'his/her food' |

*3.1.5 For "phonological bulk" or meaning differentiation*

In Lahu **šā** as a monosyllable usually means 'animal/game animal', but in compounds it means 'meat/flesh' (**và?** 'pig', **và?-šā** 'pork'). The prefixed form **ɔ̀-šā** always means 'meat/flesh'.

Wolfenden showed great insight in grouping together the kinship, body-part, genitival, and adjectival functions of the prefix. Although he did not use the term, what they seem to have in common is the notion of *inalienable possession.*[9]

### *3.2 Before verbs, especially stative ones*

Our prefix occurs in dozens of languages before both intransitive and transitive verb roots, but with particular frequency before "adjectival" or "stative" verbs. (For many examples, see Sections V and VI.)

The prefix frequently appears as a nominalizer of verbs,[10] e.g. Written Burmese (WB) **hmañ'** 'ripe', **ʔəhmañ'** 'ripeness'; **lup** 'to work', **ʔəlup** 'work' (n.); **wa'** 'fat/full', **ʔəwa'** 'fatness'.[11] In Lahu, a similar role is played by the prefix **ɔ̀-** (< ***ʔaŋ-**; below VI): **chu** 'be fat', ɔ̀-chu 'fat/grease'; **thî?** 'wrap', **ɔ̀-thî?** 'package'; **mɛ** 'be named', **ɔ̀-mɛ** 'a name'.

Such nominalized verbs often occur as cognate objects, e.g. Lahu **ɔ̀-thî? thî? ve** 'wrap a package'.[12]

*IV. Phonetics: nasality and glottality*

A key part of my historical phonetic scenario for the development of the ***a-*** prefix involves the triggering of a nasal feature by a glottal one, a phenomenon I have dubbed *rhinoglottophilia* (Matisoff 1975). The connection to be found in many languages around the world between laryngeal syllable onsets (**h-**, **ʔ-** or **Ø-** [zero]) and nasalization of the following vowel is especially noticeable in the case of low vowels, though in some languages and dialects the nasalization occurs with vowels of any height. Evidence has been adduced from Thai, Lao, Lahu, Lisu, Amoy Chinese[13] – and, further afield, to Igbo (Kwa, Nigeria),[14] East Gurage (Semitic, Ethiopia),[15] Yiddish, and British English. [16]

A few examples (using ɴ as the symbol for vowel nasalization):

(Thai) **hâa** 'five' [hâaɴ], **hὲɛ** 'parade' [hὲɛɴ], **ʔaw** 'take' [ʔawɴ], 'leave' **ʔɔ̀ɔk** [ʔɔ̀ɔɴk]

(Lahu) **ɔ̂** 'four' [ɔ̂ɴ], **ɔ́** 'bend' [ɔ́ɴ], **hɔ** 'elephant' [hɔɴ], **hɔ̂ʔ** 'wrap up' [hɔ̂ɴʔ] [17]

(Yiddish) **yaɴkev** 'Jacob, James' < Heb. **yaʔakov**; **maɴse** 'deed/story' < Heb. **maʔase**

In the 1970's, partly stimulated by rhinoglottophiliac conversations we had had, my colleague John Ohala devised a series of ingenious experiments that bear on the two principal phonetic questions at issue: (a) Why does vowel nasalization so frequently occur in the environment of glottal consonants? (b) Why is it mainly low vowels that are affected?[18] Some of Ohala's findings may be summarized as follows:

Vowel nasalization frequently occurs in the environment of laryngeals because (1) a nasal-oral coupling has negligible acoustic or perceptual effect on laryngeals, so that people are free to follow the principle of least effort, not bothering to raise the velum when it is not absolutely necessary;[19] (2) there is no aerodynamic requirement for velar closure in the articulation of laryngeals; (3) in the case of [h], the open glottis exerts a positive acoustic effect on the vowel similar to that exerted by a lowered velum.

As for the rhinoglottophiliac preference for low vowels, the reason seems to be that a somewhat lowered velum can be tolerated during a low vowel because nasal coupling has less of an effect on its acoustic quality (Ohala 1974:368). This is because the main effect of nasalization on sonorants is a downward shift in the region of the first formant. Thus the lower the first formant of a vowel is to begin with, the less apt it will be to suffer the further degradation of a downward shift. Since low vowels have higher first formants than high vowels, they are less resistant to nasalization (Ohala 1975:6).

Although the historical importance of a glottal element in initial consonants is universally recognized -- after all, *glottalized series of obstruents and sonorants must certainly be reconstructed for TB subgroups like Lolo-Burmese -- the appearance of glottal stop initially before a vowel has seemed less important. This is because prevocalic [ʔ-] is often automatic and subphonemic, as in German. Yet even predictable phonetic features can exert effects on neighboring segments, and it often behooves the analyst to take account of them. In fact a large number of TB languages do have glottal stop initially before a vowel,[20] which is of both synchronic and diachronic interest.

Even though nasal and glottal features may occur simultaneously in a synchronic syllable, from a diachronic point of view glottality seems primary. That is, one can plausibly derive a nasal feature from a glottal one (e.g. via rhinoglottophilia), but there seems to be no way to do the opposite, i.e. to derive glottality from nasality.

As we shall see below (VIII), the mysterious Written Tibetan letter known as *a-chung*, when it occurs initially before a vowel, is realized in several Tibetan dialects as glottal stop, and in others as the voiced velar spirant [ɣ]; whereas in preconsonantal position it stands for prenasalization.

Glottality and nasality are both suprasegmental features, in that they can appear at many different places within a syllable. It is interesting to place their various manifestations along a continuum. Thus Jingpho exemplifies three stages of glottalization: (a) semi-syllabic prefixal **ʔə-**; (b) preglottalized sonorants; (c) constricted vowels.[21] Similarly, several different types of nasal onsets are attested in branches of TB:

(a) nasal consonant plus full vowel
*Lotha* ***me-, mo-, mu- (dissyllabic)***
(b) nasal consonant plus schwa
*Jingpho* ***mə- (sesquisyllabic)***
(c) syllabic nasal homorganic with the root initial
*Jingpho, Ao* ***m̩b- (dissyllabic)*** [22]
(d) glottal stop plus full vowel plus nasal consonant
*Bisu* ***ʔaŋ- (dissyllabic)***
(e) glottal stop plus schwa plus nasal consonant
*Rawang* ***ʔəŋ- (dissyllabic)***
(f) glottal stop plus nasalized vowel
*Phunoi* ***ʔã- (dissyllabic)***
(g) prenasalized root initial (***monosyllabic***)
*Nzieme, Khams Tibetan, Amdo Tibetan, Luquan Lolo, Mpi* ***mb-***

This in turn is analogous to the continuum of erosion of nasal *final* consonants to be found in such branches of TB as Lolo-Burmese, where Written Burmese preserves the original final nasal consonant, while Modern Burmese has reduced this to nasalization of the vowel, and Lahu has lost the nasality altogether, compensating for this by a change in the quality of the vowel:

| | *Written Burmese* | *Modern Burmese* | *Lahu* |
|---|---|---|---|
| | ***-am*** | ***-ã*** | ***-o*** |
| 'iron' | **sam** | **θã** | **šo** |

## V. The non-nasal variant of the *a- prefix (with open vowel)

*5.1. Stressed (dissyllabic)*

We have already cited examples of the stressed version of this prefix above (3.1.1) in connection with kinship terms in Written Tibetan, Jingpho, and Lahu. In this section we proceed to a number of other languages from several different subgroups of TB that also exemplify this allomorph of the prefix. First let us look at several TB languages studied by T. Shintani in connection with his ongoing project, *Linguistic Survey of the Tay Cultural Area*: Zayein, Shanke, and Zotung.

### *(4) Tangkhul Naga*

A recent dissertation on this language (Leisan 2016) amply confirms the various semantic extensions of the versatile ***ʔa-** prefix.[28] This prefix, written /ɐ³/ in Leisan's transcription, appears especially before the categories of noun roots (the "inalienably possessed") that we have come to expect, including kinship terms and bodyparts.

### *5.2 The unstressed variant with open vowel (sesquisyllabic)*

The prime example of a language which features an unstressed variant of the ***a-** prefix is Burmese, where the prefix **ʔə-** occurs before literally hundreds of roots, both nominal and verbal. Of the 1123 pages of Judson's classic dictionary, approximately 122 (over one-tenth) are devoted to words with this prefix.[34] This poses quite a problem for lexicographers, since it requires a good chunk of the vocabulary to be listed twice, both with and without the prefix. (There is often a slight meaning difference between the prefixed and unprefixed forms.) Judson's dictionary treats the consonantal letter **ʔ-** as the first letter of the alphabet, while other dictionaries (e.g. Harada and Ohno 1979) treat it as the last one. The latter decision seems to involve less work, since the prefixed forms are only a subset of the non-prefixed ones.

## *VI. The nasal variant of the *a- prefix*

It has been mentioned that secondary nasalization in the environment of laryngeals or zero-initials is most common with low vowels (above, IV). This fits neatly with the theory that it was the low-vowelled ***ʔa-** prefix that developed "rhinoglottophiliac" nasalization in many Tibeto-Burman languages.

### *6.1 Southern Loloish: direct evidence from Bisu, Phunoi, Pyen, Sangkong, Akha*

#### *(1) Bisu*

The Bisu prefix **ʔaŋ-** occurs before both nominal and stative verbal (adjectival) roots:[35]
(A) before nouns (especially body-parts)

| | |
|---|---|
| 'bone' | **ʔaŋ-gàw** |
| 'breath' | **ʔaŋ-sà** |
| 'egg' | **ʔaŋ-ʔù** |
| 'head' | **ʔaŋ-tù** |
| 'horn' | **ʔaŋ-khjáw** |
| 'liver' | **ʔaŋ-hmaw** |
| 'meat' | **ʔaŋ-ʃà** |

The productivity of this prefix is shown by its occurrence with loanwords:

| | |
|---|---|
| 'body' | **ʔaŋ-to** (**to** < Tai; cf. Siamese **tua**) |

(B) before stative verbs (adjectives)

| | |
|---|---|
| 'bitter' | **ʔaŋ-khà** |
| 'deep' | **ʔaŋ-hnà** |
| 'full' | **ʔaŋ-pluuŋ** |
| 'many' | **ʔaŋ-bjà** |
| 'red' | **ʔaŋ-hné** |
| 'sick' | **ʔaŋ-dá** |
| 'sweet' | **ʔaŋ-cháw** |

#### *(2) Phunoi* (Bradley 1979)

The Phunoi language, closely related to Bisu, shows a weakening of the final nasal of the prefix to a nasalized vowel, yielding the prefix **ʔã$^{55}$-**:

(a) before nouns (especially body-parts)

| | |
|---|---|
| 'body hair' | **ʔã$^{55}$-hmot$^{33}$** |
| 'bone' | **ʔã$^{55}$-jau$^{11}$** |
| 'ear' | **ʔã$^{55}$-hna$^{11}$** |
| 'eye' | **ʔã$^{55}$-bia$^{33}$** |
| 'head' | **ʔã$^{55}$-tu$^{33}$** |
| 'intestines' | **ʔã$^{55}$-ʔu$^{55}$** |
| 'liver' | **ʔã$^{55}$-sin$^{11}$** |

(b) before a few adjectival verbs

| | |
|---|---|
| 'alive' | **ʔã$^{55}$-tat$^{11}$** |
| 'full' | **ʔã$^{55}$-piŋ$^{33}$** |

### *6.2 Central Loloish*

*(1) Lahu*

By far the most common Lahu prefix is **ɔ̀-**,[37] which is the regular reflex of the PLB and PTB rhyme ***-aŋ:**

| | *PTB* | *Lahu* |
|---|---|---|
| 'deaf' | ***baŋ** | **pɔ̂** |
| 'drink' | ***mdaŋ** | **dɔ̀** |
| 'old' | ***maŋ** | **mɔ̂** |
| 'rice (cooked)' | ***haŋ** | **ɔ̄** |
| 'see' | ***mraŋ** | **mɔ̀** |
| 'study' | ***mdzaŋ** | **jɔ̀** |
| 'word' | ***daŋ** | **tɔ̂** |
| 'you' | ***naŋ** | **nɔ̀** |

Of the 1414 pages in my Lahu Dictionary (Matisoff 1988), 86 pages are devoted to words with this prefix.

*(2) Lalo*

Lalo (West Central Loloish), a language closely related to Lahu, has both the non-nasal **a$^{55}$-** and the nasal variant **aŋ$^{13}$-**. As reported in Zhou Tingsheng (2016:7), the **a$^{55}$-** variant is widely used in names and kinship terms, but also occurs with a number of common nouns as well, e.g. **a$^{55}$-khuɯ$^{21}$** 'dog'. Apparently **a$^{55}$-** once functioned as a nominalizing prefix, having left a trace of this in a few words: **to$^{21}$** 'light a fire' > **a$^{55}$-to$^{21}$** 'fire'; **phiʔ$^{33}$** 'be bad' > **a$^{55}$-phiʔ$^{33}$** 'bad people'.

The nasal variant **aŋ$^{13}$-** is prefixed to some color terms: **aŋ$^{13}$-muɯʔ$^{21}$** 'green; a green object'.

### *(6.3) Rawangish*[38]

#### *(1) Rawang əŋ- (Barnard 1934)*

As noted in Benedict 1972:119:n.330, using data from Barnard 1934, "Nung has a curious nominalizing prefix **əŋ-**, which may even precede another prefix": **wam** 'to cover' > **əŋ-wam** 'a cover'; **məthip** 'to fold' > **əŋ-məthip** 'a fold'; **sü** 'to close up/to cork' > **əŋ-sü** 'a stopper'.[39]

This is only the tip of the iceberg, however. Much more copious data on a similar dialect of Rawang is now available (see next section).

#### *(2) Wadamkhong ʔa$^{22}$- and ʔaŋ$^{22}$- (Shintani 2014b)*

Shintani (2014b:ix) describes Wadamkhong as "one of the Rawangish languages spoken in the Phutao/*kam$^{22}$di$^{42}$* region of the Tay Cultural Area". This language features two descendants of the PTB ***a-** prefix: an open-syllable variant **ʔa$^{22}$-** and a nasal variant **ʔaŋ$^{22}$-**. Both occur before nouns as well as verbs, although **ʔa$^{22}$-** seems to be much more common, overwhelmingly so with respect to kinship terms. The nasal version of the prefix has a further variant under a different tone, **ʔaŋ$^{42}$**, which functions as the 3rd person pronoun in the language.

### *VII. From nasal to stop final*

Lahu provides evidence for a secondary variant with *stopped final,[54] namely **á-** < ***ʔak-**. The Lahu high-rising tone / ˊ / is regular here, due to "glottal dissimilation" in a syllable with both a glottal initial and a glottal final (see Matisoff 1970). The alternation between homorganic nasal and stopped finals is one of the most pervasive variational patterns in TB and Sino-Tibetan in general (see Matisoff 1978:23-25, and HPTB:516-525).

The Lahu **á-** prefix is nowhere near as common as **ɔ̀-**), but it does occur in about 70 words (13 pages of my Lahu dictionary). Some examples:

| | | | |
|---|---|---|---|
| 'banana' | **á-pɔ̂** | 'jewsharp' | **á-thâ** |
| 'blanket' | **á-bôʔ** | 'leaf' | **á-phàʔ** |
| 'chili pepper' | **á-phèʔ** | 'ragweed' | **á-qhâ** |
| 'cucumber' | **á-phɛ̂** | 'salt' | **á-lɛ̀ʔ** |
| 'goat' | **á-chèʔ** | 'shirt' | **á-pɔ̀ʔ** |
| 'hawk/kite' | **á-cè** | 'stick' | **á-tà** |

There are a few cases of roots which can take either prefix:

| | |
|---|---|
| 'rope/strap' | **ɔ̀-câʔ ~ á-câʔ** |
| 'thorn' | **ɔ̀-chû ~ á-chû** (also **í-chû**) |
| 'thread' | **ɔ̀-khɛ ~ á-khɛ** |

This prefix is actually semi-productive, as witness its use in a recent loanword:

| | |
|---|---|
| 'tape (for recording)' | **á-thêʔ** |

### *VIII. With apheresis of the prefixal vowel: Written Tibetan and Proto-Lolo-Burmese*

One of the most interesting languages from the viewpoint of the interrelationship between glottality and nasality is Tibetan. In particular there is the much-discussed problem of the "mysterious" WT letter known as *a-chung*, lit. "little a".[55] Various authors have symbolized it in many different ways:

Jäschke (1881/1958): ˳ preconsonantally; < prevocalically
Bell (1920/1965) does not transcribe it at all in pre-consonantal position
Wolfenden (1929): **a̤**
Miller (1968): **ḥ**
Matisoff (1970; 2003): **ḥ**
Benedict (1972): apostrophe **'**
Hu T'an (1979): **ɦ**
J. Sun (1986): **h̲**
Beyer (1992 ): small upper-case **ɴ**
Hill (2005): **v**; (2009) **ḥ**

*A-chung* occurs in three structural positions in the WT syllable: (1) initially before a vowel; (2) pre-consonantally; (3) post-vocalically. Its function and phonetic value in each position is quite different, to the point where some scholars (Coblin 2002, Sun 1986, Sprigg 1987) have maintained that *a-chung* was merely an orthographic device, with no phonetic value *per se*. It is my contention, however, that (1) and (2) are ultimately relatable to each other phonetically, whereas (3) is indeed merely an orthographic device.

Returning to the morphophonemic overview of the "a-prefix" (above, Section II), I assume that (1) the original PTB form was ***ʔa-**; (2) an unstressed variant [ʔə̆-] developed at an early date; (3) a nasalized "rhinoglottophiliac" pronunciation [ʔə̃-] or [ə̃-] somehow emerged. Tibetan seems to have gone one step further: (4) this unstressed nasalized vowel dropped (underwent apheresis) in pre-consonantal position, leaving only the historically secondary nasalization [ ~ ].[56] This account presupposes a concomitant change in syllabic structure, from fully dissyllabic sequences of prefix plus root (1), to sesquisyllabic forms (2 and 3), to monosyllabic ones

### *8.1 A-chung initially before a vowel: a glottal feature*

In this prevocalic position, *a-chung* stands in graphic contrast with another letter known as *a-chen* (lit. "big a"). Despite the view rather confusingly espoused by Jäschke that *a-chung* stood for "smooth vocalic ingress" or "vowel absolute" or "pure zero vocalization", while *a-chen* represented initial glottal stop,[57] I consider these two letters to have stood for stressed (*a-chen*) vs. unstressed (*a-chung*) variants of the same prefix.[58]/[59]

Evidence for a glottal feature is clearest in this pre-vocalic position, where *a-chung* is realized in some dialects as [ʔ] (Western dialects like Ladakhi and Lahoul), and in others (e.g. Khams) as [x] or [ɣ], or zero. Hill (2005, 2009) believes that before vowels or **-w-** (and also post-vocalically) it stood for a voiced fricative [ɣ]. Sun (2003), quoted in Hill (2005:123), revised his interpretation of pre-vocalic a-chung from "zero" to something approximating Hill's view, i.e. a voiced "guttural spirant", either [ɦ] or [ɣ] or [ʁ].[60]

Benedict (1972:123) also recognizes both a stressed and an unstressed variant of the prefix, the former occurring with kin terms, and the latter occurring as a verbal prefix where it often interchanges with prefixed **m-** or **b-**. The interpretation of *a-chen* as indicating the stressed variant is supported by the fact that it occurs prefixally in many kinship terms (Jäschke 603 ff.): [61]

| | | | |
|---|---|---|---|
| **ʔa-sru** | 'aunt' | **ʔa-khu** | 'father's brother' |
| **ʔa-ne** | 'father's sister; grand-aunt' | **ʔa-phyi** | 'grandmother' |
| **ʔa-baŋ** | 'husband of parent's sister' | **ʔa-jo** | 'man's elder brother' |
| **ʔa-ma** | 'mother' | **ʔa-źaŋ** | 'mother's brother' |
| **ʔa-che** | 'woman's elder sister' | | |

In Sun's Amdo dialect, however, the prevocalic *a-chung* of Central Tibetan merged with *a-chen* to become [ʔ]. In other Amdo dialects (e.g. Golok), the modern reflex of Central Tibetan *a-chung* has become a voiced uvular or velar spirant. Hill (2005:109) maintains there are no strong arguments for analyzing a-chen as [ʔ] as opposed to vocalic onset. He is willing to admit that perhaps all vowel-initial words in Tibetan had subphonemic glottal stop (as in German), but he feels that a-chen "certainly does not represent a

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[57]Bell (1920:ix) seems to have the opposite interpretation from Jäschke: "When a vowel is initial, either *a-chen* or *a-chung* is used as its base. The difference in pronunciation of these two is that the throat is opened for *a-chen* and kept closed for *a-chung*."

[58]I have long wondered whether the "chung" ('little') could mean 'unstressed'. Cf. the WT compound **chuŋ-rtags** (Mod. Tib. **cūŋdaà**) 'the less-than sign (<)' (Goldstein 2001:369-70) [**rtags** 'mark, sign, token']. This Tibetan adjective can also mean 'weak', as in the expression translated as "bullying the weak but fearing the strong" (Goldstein, *loc. cit.*).

[59]Jäschke represents *a-chen* by an apostrophe (as opposed to Benedict, who uses the apostrophe for *a-chung*). Hill represents *a-chen* as **q-**, and points out that the terms *a-chung* and *a-chen* appear never to have been used by Tibetan grammarians themselves (2005:108).

[60]Solnit points out (p.c., 2017) that this is reminiscent of the realization of Mandarin zero-initial as "a frictionless velar or uvular voiced consonant" (Chao 1968:20), or as **ŋ-** "for a very small minority of speakers".

[61]Repeated from 3.11, above. Cf. stressed Lahu **a-** (< ***ʔa-**) in kinship terms vs. unstressed **ɔ̀-** (< ***ʔaŋ-**) elsewhere (above, Section VI).

glottal stop". On the other hand, Beyer (1992:43) claims that "glottal stop is, of course, phonemic in Tibetan, as in such minimal pairs as **og** 'underpart' (with *a-chung*: our **ḥog**) and **ʔog** (with *a-chen*) 'neck'".

A crucial example in this connection, where WT has prevocalic *a-chung*, is this very etymon for 'below/under':

WT **ḥog**; Lahu **hɔ́(n)**; WB **ʔauk**; Jg. **ləwúʔ**; Bisu **ʔaŋ-ʔɔ́k** [HPTB:116]

As I demonstrated long ago, the Lahu high-rising tone / ˊ / is the result of two "glottal incidents" in the pre-Lahu syllable: PLB ***(ʔ)ok** > Pre-Lahu ***ʔɔʔ**.[62] My explanation of the Lahu high-rising tone here works equally well regardless of what phonetic interpretation is given to pre-vocalic *a-chung* as opposed to *a-chen*. It makes little difference which (if either) of the two represented "smooth vocalic ingress" or which one represented glottal stop. A "glottal incident" is defined as "h, ʔ, or zero initial". The Lahu form is dispositive here, since it has no initial glottal stop but has developed the high-rising tone in this word. Note also the optional rhinoglottophiliac nasalization in the Lahu form with the low vowel /ɔ/. [63]

### 8.2 *A-chung* before a voiced or aspirated consonant: a nasal feature

In nDzorge Amdo Tibetan, the evidence is clear in pre-consonantal position, where a-chung represents prenasalization of the root-initial.[64]

Like the ordinary nasal prefix **m-**, *a-chung* occurs only before aspirates and sonants, never before surds. In the Amdo dialect studied by Sun, these two WT nasal onsets were merged to homorganic prenasalization of the root-initial.

WT **ḥ-** > Khams **ŋ-** /----velars
**n-** /----dentals, palatals, sibilants
**m-**/----(simple) labials

A few examples from Sun 1986:

| | *Written Tibetan* | *nDzorge Amdo* |
|---|---|---|
| 'drink' | **ḥthuŋ-ba** | ***n*thoŋ** |
| 'insect/worm' | **ḥbu** | ***n*bʏ** |
| 'sit (pres.)' | **ḥdug-pa** | ***n*dʏg** |
| 'small wild dog' | **ḥphar-ba** | ***n*phæræ** |
| 'wild yak' | **ḥbroŋ** | ***n*dźoŋ** |
| | | |
| 'arrow' | **mda** | ***n*dæ** |
| 'kidney' | **mkhal-ma** | ***n*khamæ** |
| 'neck' | **mgul** | ***ng*ʏr** |

There are also cases where the WT form lacks a prefix, but nDzorge has a prenasalized initial:

| | | |
|---|---|---|
| 'house' | **khaŋ-pa** | ***n*khaŋ-wæ** |

Sun believes that preconsonantal a-chung was meant to stand for prenasalization from the very beginning of the Tibetan script.[65] The question then arises as to why the inventors of the Tibetan script did not use a nasal symbol to represent it. Sun's response is that a prenasalized consonant must be at the same place of articulation as the oral phase, since they are inseparable units, such that native speakers can hardly be aware that they have two components. Sun makes the excellent point that *a-chung* represents *absence*, since it seems never to have had any distinct phonetic value. Before a consonant, all that it was called upon to do was indicate that the prenasalized series was *different* from the non-prenasalized one.

Other evidence strongly confirms the nasality of preconsonantal *a-chung*:

· In Central and Western dialects of Tibetan, in compounds where the 2nd element begins with a-chung, the latter is sometimes pronounced with a nasal onset:[66]

**dge-ḥdun** 'priesthood' > Ladakhi/Lahoul **gen-dun** (Jäschke:85)
**kha-ḥdon** 'written prayer' > Lhasa **khan-dön** (Bell:372)
**sku-ḥdar skyon-pa** 'shudder' > Lhasa **kün-dar kyom-pa** (Bell:387)

Some more examples of this are cited in Wolfenden (p.32, note.1):

**bka-ḥgyur** 'word of Buddha' > **kan-gyur** (Jäschke:38 calls this pronunciation 'common')
**bka-ḥbum** 'the 100,000 precepts' (book) > **kam-bum** (a 'vulgar pronunciation' according to Jäschke, *loc. cit.*)

· Most importantly, there are good correspondences between words with WT *a-chung* and Proto-Lolo-Burmese cognates with *prenasalized initials.[67] The Lahu reflexes have voiced initials, a sure indication of an earlier *prenasalized one. A Burmese voiced initial, as in the cognate for 'this', is also a frequent (though not certain) indicator of earlier prenasalization.

| | *Written Tibetan* | *Lahu* | *Written Burmese* |
|---|---|---|---|
| 'drink' | **ḥthuŋ-ba** | **dɔ̀** | |
| 'drip/drop' | **ḥdzag-pa** | **(ɔ-)jâ?** | |
| 'prick' | **ḥdzugs-pa, zug-pa** | **jû?** | |
| 'sneak/slink' | **ḥjab-pa** | **(jâ?)**[68] | |
| 'this' | **ḥdi** | | **(di)**[69] |

So where did this prenasalization come from? As indicated above, it arose from the dropping of the vowel in the unstressed rhinoglottophiliac variant of the ***ʔa-** prefix, that is: ***ʔa-** > ***ʔə-** > ***ə̃-** > / ~ /, which yielded monosyllabic prenasalized forms in place of the previous dissyllabic or sesquisyllabic ones.

### *8.3 A-chung post-vocalically: an orthographic device*

Sun (1986:114) lists the various post-vocalic functions of *a-chung*, including to transcribe foreign words, onomatopoeic expressions, and vowel length (especially in loans from Sanskrit), and to disambiguate homographs. This latter function is of particular interest:

--In **bkaḥ** 'word/speech (hon.)', the *a-chung* is merely an orthographic device to indicate that the **b-** is prefixal, and not the root-initial. Without the *a-chung* the syllable would be read "bak", with the "inherent vowel" **/a/** inserted after the first consonant.
--In **dgaḥ** 'joy', if there were no final *a-chung* it would be pronounced "dak".

### *8.4 Rhinoglottal coexistence*

I long ago cited *a-chung* as an example of "rhinoglottal coexistence" (1975:273). *A-chung* undoubtedly did develop a nasal coarticulation, but I believe that this nasality is diachronically secondary, and that the real distinctive feature of the proto-prefix was *glottality* (see Matisoff 1970 and 1972a:16, n. 28).

I thus seem to be in substantial agreement with Hill 2005, who hypothesized that pre-consonantal and pre-vocalic *a-chung* represent the same phoneme, since the different phonetic values they have in those positions are in complementary distribution. But that is not the only criterion for co-membership in a phoneme. *Phonetic similarity* must also play a role.[70] My rhinoglottophiliac explanation seems to provide that missing link.

### *8.5 Relationship between a-chung and the WT m- prefix*

The fact that we have the WT sequences **mn-** and **mŋ-** shows such words to have been sesquisyllabic. Thus forms like **mnam-pa** 'have a smell', **mnal-ba** 'sleep (resp.), **mŋal** 'womb', **mŋon-pa** 'conspicuous/visible' must have been pronounced [mənam], [mənal], [məŋal], [məŋon]. Both of these prefixes occur only before voiceless aspirated and voiced initials, but not before voiceless unaspirated ones.[71] But **m-** occurs before nasals, while **ḥ-** does not. The phonetic difference between the two prefixes is that "mC" represented a sesquisyllabic sequence [məC...], whereas "ḥC" represented a monosyllabic prenasalized syllable [ɴC...].[72]

In WT dictionaries the prefixes occur in the order g-, d-, b-, **m-, ḥ-**, r-, l-, s-, br-, bs-. The fact that m- and ḥ- occur consecutively implies that they share a phonetic feature. Wolfenden in fact would claim that the *three* consecutive prefixes **b-, m-, ḥ-** are all morphophonemically related, although this is irrelevant to our present concerns.

### *8.6 Pre-verbal vs. pre-nominal use of the WT prefixes*

For Wolfenden (1929: 15-16) the Tibetan verb is simply a verbal noun, the mere name of a state or action, barely distinguishable at times from the adjective or noun. So in order to express subjective relation, position, or movement with regard to the object, and any necessary conception of time, the archaic language attached "particles" (i.e. prefixes) which were quite external to the root itself.

On the other hand, Wolfenden believed that "The archaic substantive does not appear to have ever originally possessed prefixes... That substantives occur now with prefixes is nothing against this" (p. 50). "What is now the prefix of a substantive is ... often of entirely different origin, representing a root which originally formed with the following word a kind of synonym-compound, with the second member of which it only later became telescoped as a 'prefix'" (*ibid.*).[73]

Here are a few interesting examples of the pre-nominal use of a-chung which show variation between *a-chung* and another prefix, perhaps implying that different compound constituents were reduced to yield the variant forms:

| | *PTB* | *WT* |
|---|---|---|
| 'flea' | *s-ləy | ḥji-ba ~ lji-ba |
| 'head' | *m-gaw | ḥgo ~ mgo |
| 'neck (1)' | *m-liŋ | ḥjiŋ-pa ~ mjiŋ-pa |
| 'neck (2)' | *m-gul ≍ *m-gil | ḥgul ~ mgul |
| 'tadpole' | | ḥjoŋ ~ ljoŋ |

### *IX. Correspondences among the prefixal variants*

Some random examples of correspondences among our prefixal variants across subgroups of Tibeto-Burman:

*Correspondence between WT a-chung and Lotha syllabic nasal*

| | *WT* | *Lotha* |
|---|---|---|
| 'throw' | ḥphen | mpen |
| 'suck' | ḥjibs-pa | ntsip 'kiss' |

*Correspondence between WT a-chung and Loloish *ʔaŋ-*

| | *WT* | *Loloish* | *PTB* |
|---|---|---|---|
| 'insect' | ḥbu | Bisu ʔaŋ-baɔ[74] | *bəw |

*Correspondences between WT a-chung and Mikir ing-*

| | ***WT*** | ***Mikir*** |
|---|---|---|
| 'bloom' | **ḥbar-ba** | **ing-par** |
| 'open' | **ḥbu-ba** | **ing-pu** |
| 'suck'[75] | **ḥjibs-pa** | **ing-jùp ~ ing-sip** |

*Correspondences between WT m- and Loloish *ʔaŋ-*

| | ***WT*** | ***Loloish*** | ***PTB*** | |
|---|---|---|---|---|
| 'liver' | **mchin-pa** | Phunoi | **ʔã$^{55}$-sin$^{11}$** | ***m-sin** |
| 'stinking/smell' | **mnam-pa** | Bisu | **ʔaŋ-nam** | ***m-nam** |

*Correspondences between WT m- and Mikir ing-/ang-*

| | ***WT*** | ***Mikir*** |
|---|---|---|
| 'liver' | **mchin-pa** | **ang-thin ~ ing-thin** |
| 'smell/stink' | **mnam** | **ing-nim ~ ang-nim** |

*Correspondences between PTB *m- and Mikir ing-*

| | ***PTB*** | ***Mikir*** |
|---|---|---|
| 'lick' | ***m-lyak** | **ing-lek** |
| 'liver' | ***m-sin** | **ang-thin ~ ing-thin** |
| 'salt/yeast' | ***m-di** | **ing-ti** |
| 'twenty' | ***m-kul** | **ing-koi** |

*Correspondences between Mikir ing- and Ao me-*

| | ***Mikir*** | ***Ao*** |
|---|---|---|
| 'itch' | **ing-thak** | **me-sak** |
| 'lick' | **ing-lek** | **me-zak** |
| 'smell' | **ing-nim** | **me-nem** |

## *X. Conclusion*

I hope to have shown that there is a complex set of issues (morphophonemic, etymological, and semantic) involved in the deceptively simple-looking reconstruction of a PTB prefix ***a-**.

### *10.1 Morphophonemic variation*

Evidence has been presented that several different variant forms should be reconstructed: stressed vs. non-stressed allomorphs, as well as variants that contain a nasal or a palatal element.

Emphasis was placed on the interrelationship between the suprasegmental features of glottality and nasality.

### *10.2 Semantic range*

Many of the numerous semantic functions which this prefix has developed, including its appearance with kinship terms, personal names, bodyparts, color words, and adjectives, may largely be subsumed under the notion of *inalienable possession*. More grammaticalized roles, including those of nominalizer, genitivizer, and relativizer, as well as indicator of a 3rd person subject/object or a 3rd person possessor, seem clearly to be later developments.

It must be admitted, however, that in the course of time the semantics of this prefix has been obscured by analogy, so that it now occurs with a random assortment of nouns and even with some action verbs in the various modern languages.

### *10.3 Chinese cognate*

This prefix is also well attested in Chinese, where it appears primarily with proper names, kinship terms, and personal pronouns. Written with the character 阿, it is pronounced /ā/ in Mandarin. Schuessler (2007:149) gives the following examples of this "vernacular prefix": ā-mǔ 阿母 'mother' [Han texts]; ā-nú 阿奴 'younger brother'; ā-shuí 阿谁 'who'; ā-nǐ 阿你 'you'. More examples are to be found in Wu Jingrong et al. (1979:1): Ā-bǎo 阿宝 'A-bao' (name); ā-dà 阿大 'the eldest'; ā-gē 阿哥 'elder brother'; ā-diē 阿爹 'dad'; ā-pó 阿婆 'granny'.

Clearly then, this prefix must be reconstructed at the Proto-Sino-Tibetan level.

### *10.4 Indo-European parallel developments*

As already pointed out in Matisoff 1975:277-278, there is a striking parallel between our PTB ***ʔa-*** prefix and the Proto-Indo-European syllabic nasals reconstructed as ***ṃ*** and ***ṇ***. These PIE syllabic nasals have, wholly or partially, vocalic reflexes in daughter languages. In Sanskrit and Greek the syllabic nasals become short /a/, while in Germanic and Latin the reflex is a short vowel plus nasal consonant: **un-** in Germanic, and **in-**, **-en**, or **-em** in Latin:

| | *PIE* | *Sanskrit* | *Greek* | *Germanic* | *Latin* |
|---|---|---|---|---|---|
| 'hundred' | ***kṃtóm** | **śatam** | **hekatón** | Gm. **hundert** | **centum** |
| 'ten' | ***dekṃ** | **dáśa** | **déka** | Gothic **taihun** | **decem** |
| 'coming (n.)' | ***gʷṃtí** | **gatiḥ** | **basis** | | **(con)ventio** |
| 'neg. prefix' | ***ṇ-** | **a-** | **a-** | Eng. **un-** | **in-** |
| 'immortal' | ***ṇ-mṛto-** | **ámṛta-** | **ámbrotos** | | **immortālis** |
| 'acc. suffix' | ***-ṃ** | | **-a** | | **-em** |
| 'foot' (object) | ***ped-ṃ** | | **poda** | | **pedem** |

There is a slight difference between the PTB and PIE cases, since for PTB I consider the nasal component of the root to be secondary, whereas in Indo-European the nasal component is viewed as primary, with the vocalic element of the reflexes treated as secondary. This may be something of a distinction without a difference, however, since those PIE syllabic nasals are highly abstract entities, and it is hard to see how they could have been pronounced without a preceding or following vowel.